

**CHILTON'S**

**TRUCK AND VAN  
MANUAL 1988-1992**

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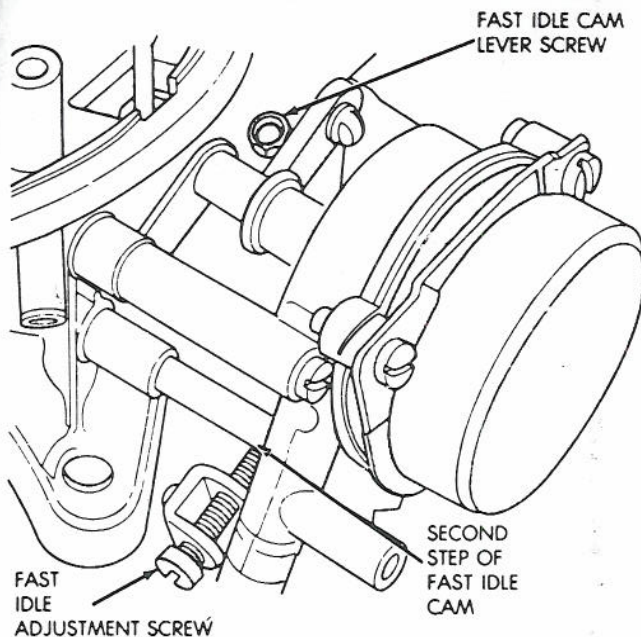
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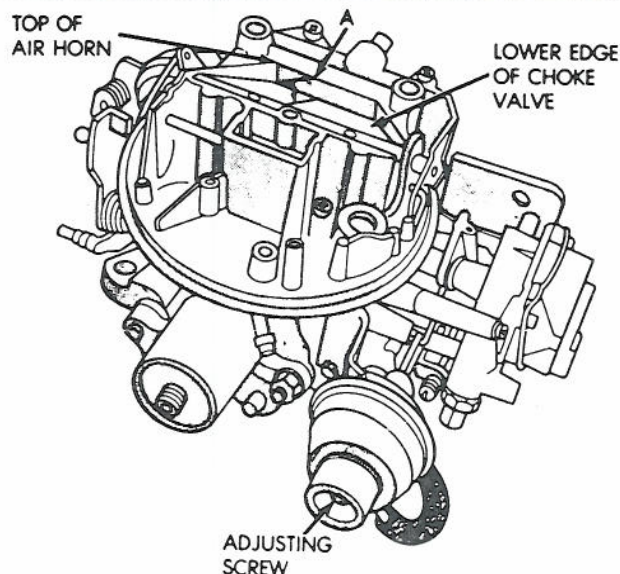
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Motorcraft 2150 fast idle cam adjustment



Motorcraft 2150 initial choke valve clearance adjustment

3. Open the throttle and rotate the choke cover until the choke valve is held close.

4. Tighten 1 cover retaining screw.

5. Close the throttle with the fast idle screw adjustment screw on the top step of the cam.

6. Use a hand held vacuum pump and apply vacuum to hold the choke diaphragm against the setscrew.

7. Measure the clearance between the lower edge of the choke valve and the top of the air horn.

8. Adjust the clearance by turning the screw at the rear of the choke vacuum diaphragm.

9. Make a fast idle cam adjustment.

### Choke Setting

The automatic choke setting is made by loosening the choke cover in the desired direction as indicated by an arrow on the face of the cover. The original setting will be satisfactory for most driving conditions. However, if the engine stumbles or stalls on acceleration during warmup, the choke may be set richer or leaner no more than two graduations from the original setting.

### Unloader Adjustment

1. With the throttle held fully open, apply pressure on the choke valve toward the closed position and measure the clearance between the lower edge

of the choke valve and the air horn wall.

2. Adjust by bending the tang on the throttle lever which contacts the fast idle cam. Bend toward the cam to increase the clearance.

**NOTE: Do not bend the unloader down so that it binds or interferes with any other component.**

3. A clearance of 0.070 in. (1.8mm) must be between the unloader tang and the edge of the fast idle cam. Final unloader adjustment must always be done on the vehicle. The throttle should be fully opened by depressing the accelerator pedal to the floor. This is to assure that full throttle is obtained.

## ROCHESTER MODEL 2SE/E2SE Jeep

(All measurements in inches or degrees)

Year	Carburetor Number	Float Level	Air Valve Spring	Choke Coil Level	Fast Idle	Primary Vacuum Break	Secondary Vacuum Break	Air Valve Rod	Choke Unloader
					Cam 2nd Step				
1986	17085380	5/32	1	0.085	22°	26°	32°	1°	40°
	17085381	5/32	1	0.085	22°	26°	32°	1°	40°
	17085382	5/32	1	0.085	22°	26°	32°	1°	40°
	17085383	5/32	1	0.085	22°	26°	32°	1°	40°
	17085384	1/8	1	0.085	22°	25°	30°	1°	40°
1987	17084580	5/32	1	0.085	22°	26°	32°	1°	40°
	17084581	5/32	1	0.085	22°	26°	32°	1°	40°



# 23 CARBURETORS DOMESTIC

## ROCHESTER MODEL 2SE/E2SE Jeep

(All measurements in inches or degrees)

Year	Carburetor Number	Float Level	Air Valve Spring	Choke Coil Level	Fast Idle Cam 2nd Step	Primary Vacuum Break	Secondary Vacuum Break	Air Valve Rod	Choke Unloader
	17084582	5/32	1	0.085	22°	26°	32°	1°	40°
	17084583	5/32	1	0.085	22°	26°	32°	1°	40°
	17084384	1/8	1	0.085	22°	25°	30°	1°	40°

**NOTE:** Specified angle for use with angle degree tool

① Maximum degree setting

② 2nd step on cam

③ Tamper resistant—riveted cover

## Rochester Carburetors

### MODELS 2SE/E2SE

#### Float and Fuel Level Adjustment

1. Start the engine and run it to normal operating temperature.
2. Remove the vent stack screws and the vent stack.
3. Remove the air horn screw adjacent to the vent stack.
4. With the engine idling and the choke fully opened, carefully insert float gauge J-9789-136 for E2SE carburetors and tool J-9789-138 for 2SE carburetors, into the air horn screw hole and vent hole. Allow the gauge to rest freely on the float.

**NOTE:** Do not press down on the float.

5. With the gauge at eye level, observe the mark that aligns with the top of the casting at the vent hole. The float level should be within 0.06 in. (1.5mm) of the specifications. If not, remove the air horn and adjust the float as follows:

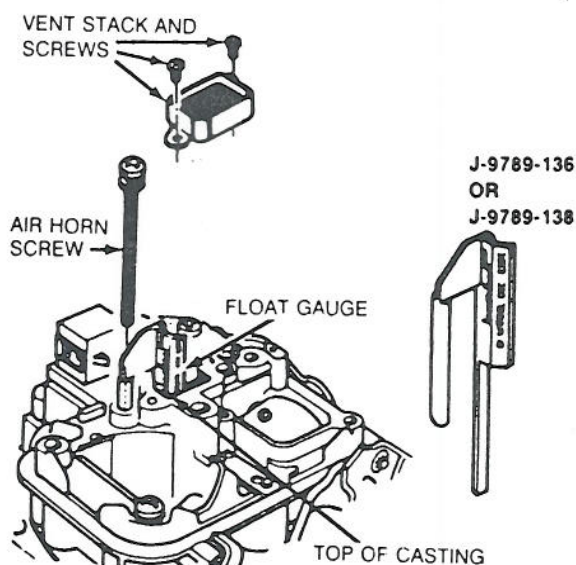
- a. Hold the retainer pin firmly in place and push the float down, lightly, against the inlet needle.

- b. Using an adjustable T-scale, at a point  $\frac{3}{16}$  in. (5mm) from the end of the float, at the toe, measure the distance from the float bowl top surface (gasket removed) to the top of the float at the toe. If not within specification, remove the float and bend the arm.

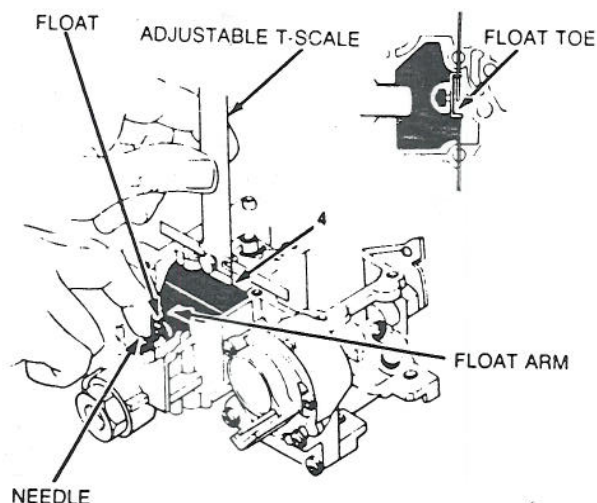
#### Fast Idle Cam Adjustment

1. Make sure the choke coil adjustment is correct and that the fast idle speed is correct.

2. Obtain a choke angle gauge, tool No. J-26701-A. Rotate the degree scale to the zero degree mark opposite the pointer.



Rochester 2SE and E2SE float level measurement

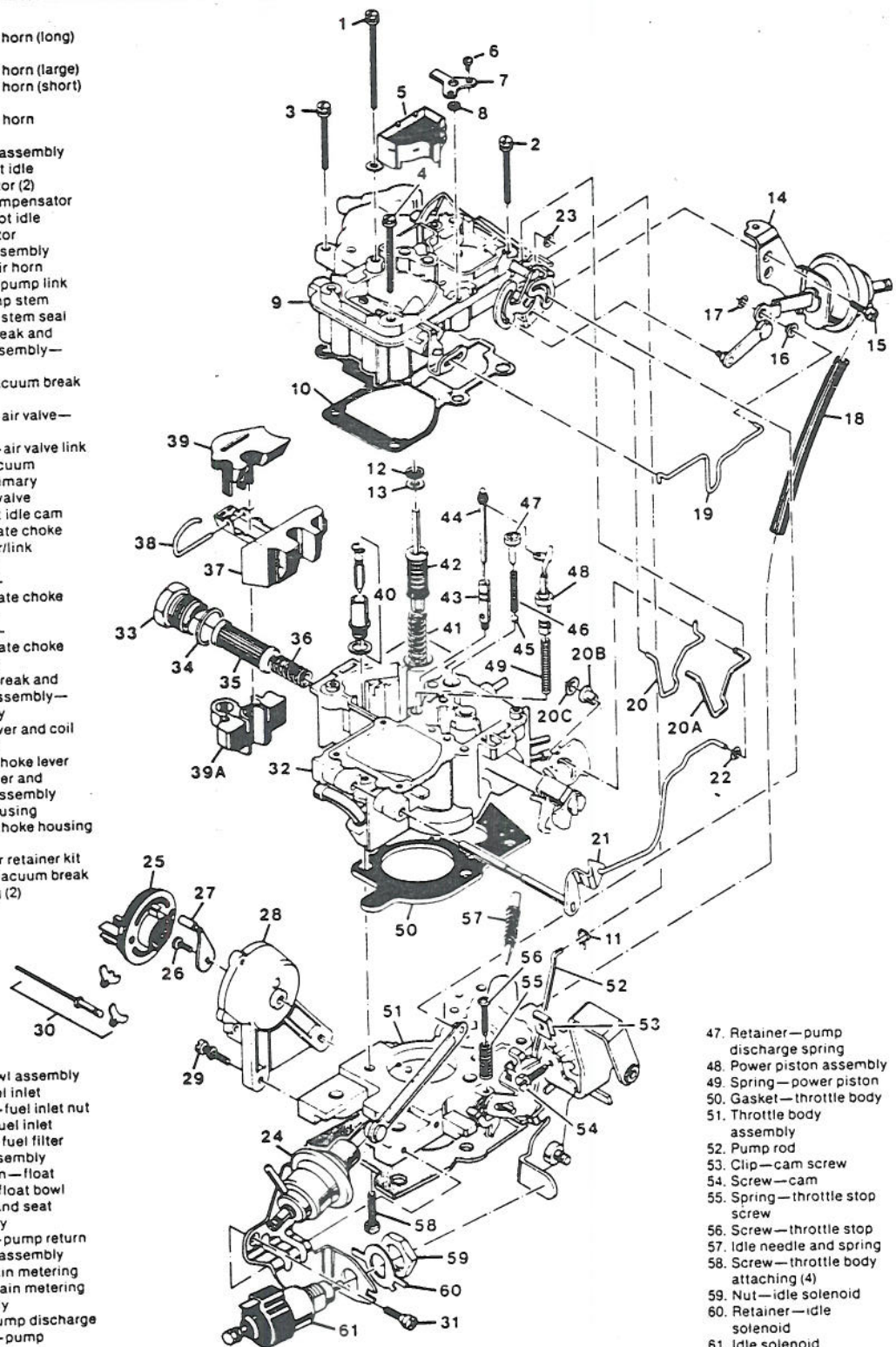


Rochester 2SE and E2SE float level adjustment

1. Screw—air horn (long) (2)
2. Screw—air horn (large)
3. Screw—air horn (short) (3)
4. Screw—air horn (medium)
5. Vent stack assembly
6. Screw—hot idle compensator (2)
7. Hot idle compensator
8. Gasket—hot idle compensator
9. Air horn assembly
10. Gasket—air horn
11. Retainer—pump link
12. Seal—pump stem
13. Retainer—stem seal
14. Vacuum break and bracket assembly—primary
15. Screw—vacuum break attaching
16. Bushing—air valve—link
17. Retainer—air valve link
18. Hose—vacuum break—primary
19. Link—air valve
20. Link—fast idle cam
21. Intermediate choke shaft/lever/link assembly
22. Bushing—intermediate choke shaft link
23. Retainer—intermediate choke shaft link
24. Vacuum break and bracket assembly—secondary
25. Choke cover and coil assembly
26. Screw—choke lever
27. Choke lever and contact assembly
28. Choke housing
29. Screw—choke housing (2)
30. Stat cover retainer kit
31. Screw—vacuum break attaching (2)

32. Float bowl assembly
33. Nut—fuel inlet
34. Gasket—fuel inlet nut
35. Filter—fuel inlet
36. Spring—fuel filter
37. Float assembly
38. Hinge pin—float
39. Insert—float bowl
40. Needle and seat assembly
41. Spring—pump return
42. Pump—assembly
43. Jet—main metering
44. Rod—main metering assembly
45. Ball—pump discharge
46. Spring—pump discharge

47. Retainer—pump discharge spring
48. Power piston assembly
49. Spring—power piston
50. Gasket—throttle body
51. Throttle body assembly
52. Pump rod
53. Clip—cam screw
54. Screw—cam
55. Spring—throttle stop screw
56. Screw—throttle stop
57. Idle needle and spring
58. Screw—throttle body attaching (4)
59. Nut—idle solenoid
60. Retainer—idle solenoid
61. Idle solenoid



Rochester 2SE and E2SE carburetor—exploded view



# 23 CARBURETORS DOMESTIC

3. With the choke valve completely closed, place the magnet on the tool squarely on the choke plate. Rotate the bubble unit until it is centered.

4. Rotate the degree scale until the 22 degree mark is opposite the pointer.

5. Place the fast idle screw on the second step of the cam.

6. Close the choke plate by pushing on the intermediate choke lever.

7. Push the vacuum brake lever toward the open choke position until the lever is against the rear tank on the choke lever.

8. Adjust by bending the fast idle cam rod until the bubble is centered.

## Choke Coil Lever Adjustment

**NOTE:** Once the rivets and choke cover are removed, a choke cover retainer kit is necessary for assembly.

1. Remove the rivets, retainers, choke cover and coil following the instructions found in the cover retainer kit.

2. Position the fast idle adjustment screw on the highest stop of the fast idle cam.

3. Push on the intermediate choke lever and close the choke plate.

4. Insert a 0.85 in. plug gauge, in the hole adjacent to the coil lever. The edge of the lever should barely contact the plug gauge.

5. Bend the intermediate choke rod to adjust.

## Unloader Adjustment

1. Obtain a carburetor choke angle gauge, tool No. J-26701-A. Rotate the scale on the gauge until the 0 mark is opposite the pointer.

2. Close the choke plate completely and set the magnet squarely on top of it.

3. Rotate the bubble until it is centered.

4. Rotate the degree scale until the 40° mark is opposite the pointer.

5. Hold the primary throttle valve wide open.

6. Bend the throttle lever tang until the bubble is centered.

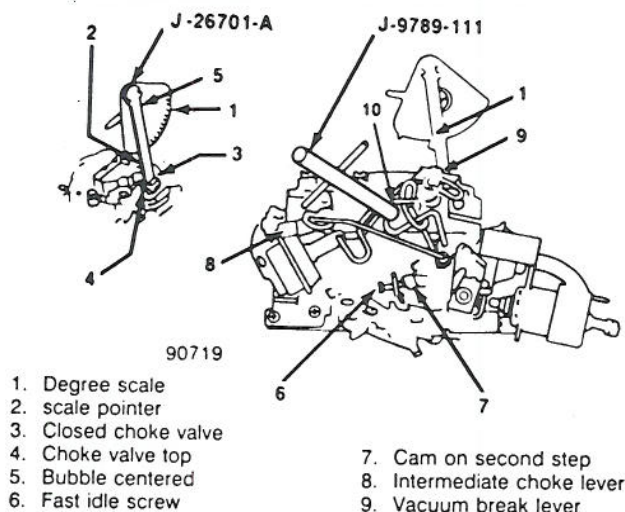
## Primary Vacuum Break Adjustment

1. Obtain a carburetor choke angle gauge, tool No. J-26701-A. Rotate the scale on the gauge until the 0 mark is opposite the pointer.

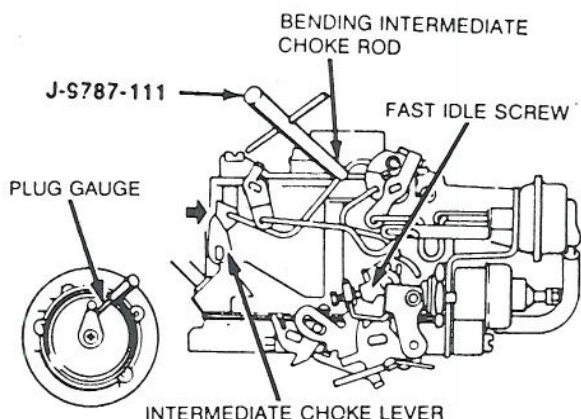
2. Rotate the degree scale until the correct specification mark is opposite the pointer.

3. Place tape over the vacuum bleed in the diaphragm.

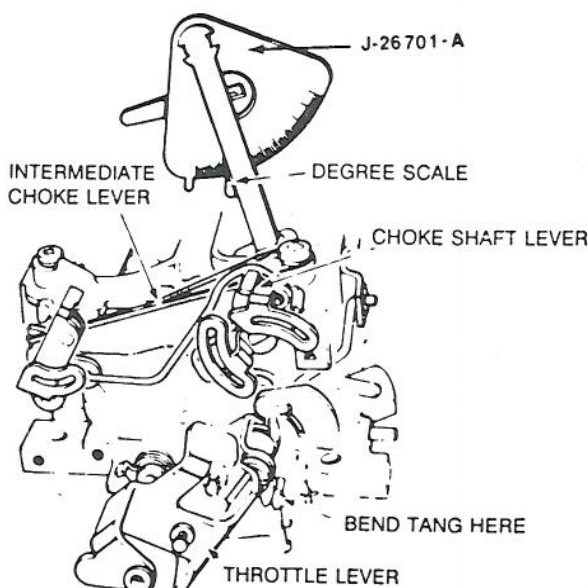
4. Set the choke vacuum diaphragm using a hand vacuum pump.



Rochester 2SE and E2SE fast idle cam adjustment



Rochester 2SE and E2SE choke coil lever adjustment



Rochester 2SE and E2SE choke unloader adjustment

5. Hold the choke valve at its closed position by pushing on the choke lever.
6. Adjust to the proper specification by bending the primary vacuum break rod.

## Secondary Vacuum Break Adjustment

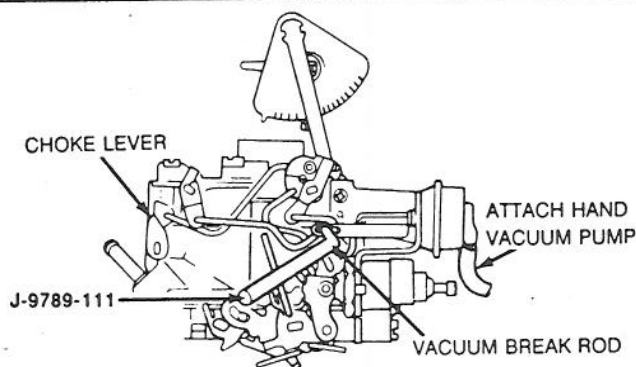
1. Obtain a carburetor choke angle gauge, tool No. J-26701-A. Rotate the scale on the gauge until the 0 mark is opposite the pointer.
2. Rotate the degree scale until the correct specification mark is opposite the pointer.
3. Place tape over the vacuum bleed in the diaphragm.
4. Seat the choke vacuum diaphragm using a hand vacuum pump.
5. Hold the choke valve at its closed position by pushing on the choke lever.
6. Adjust to the proper specification by bending the secondary vacuum break rod.

## Air Valve Spring Adjustment

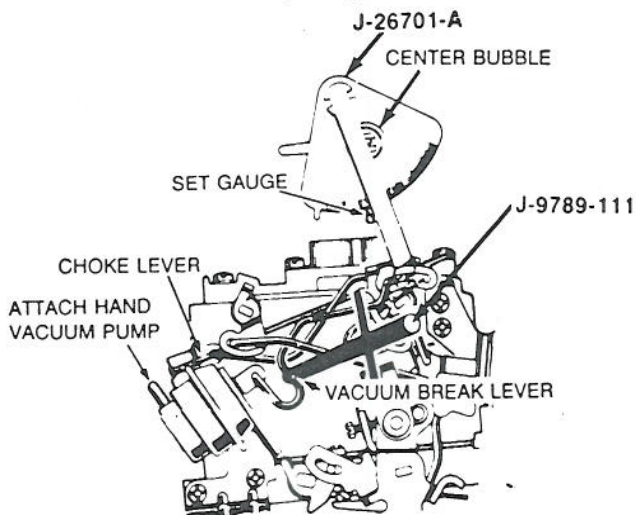
1. If necessary, remove the intermediate choke rod to gain access to the lock screw. Loosen the lock screw.
2. Turn the tension adjusting screw clockwise until the air valve opens slightly.
3. Turn the adjusting screw counterclockwise until the air valve just closes.
4. Continue counterclockwise to the specified number of turns.
5. Tighten the lock screw.

## Air Valve Rod Adjustment

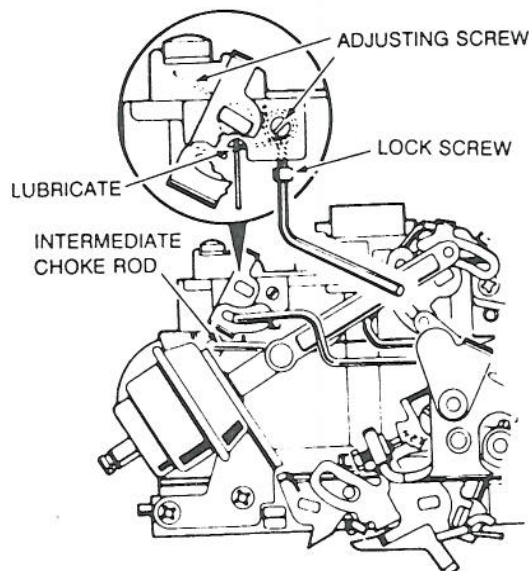
1. Obtain a carburetor choke angle gauge, tool No. J-26701-A. Rotate the scale on the gauge until the 0 mark is opposite the pointer.
2. Rotate the degree scale until the correct specification mark is opposite the pointer.
3. Seat the choke vacuum diaphragm using a hand vacuum pump.
4. Place tape over the vacuum bleed in the diaphragm.
5. Apply light pressure to the air valve shaft in the direction to open the valve to ensure all slack is removed between the air valve link and the plunger slot.
6. Bend the air valve link with tool J-97789-111 until the bubble is centered.



Rochester 2SE and E2SE primary vacuum break adjustment

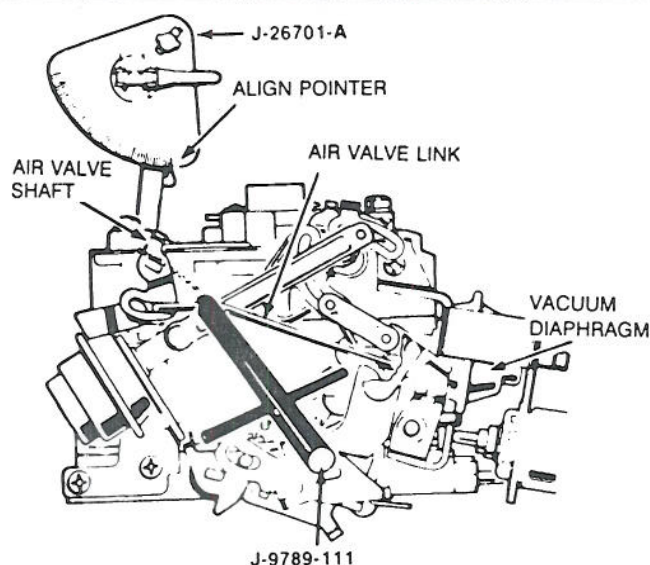


Rochester 2SE and E2SE secondary vacuum break adjustment



Rochester 2SE and E2SE air valve spring adjustment adjustment





Rochester 2SE and E2SE air valve link adjustment adjustment

## IMPORT CARBURETOR SERVICE

### Carburetor Identification

All carburetors are identified by code numbers, either stamped on the attaching flange side, the main body or on a metal tag retained by a bowl cover screw. This identification number is important in order to obtain the correct carburetor replacement or parts and to properly adjust the carburetor when matched to a specific engine.

### Carburetor Overhaul Tips

When the carburetor is disassembled, wash all parts (except diaphragms, electric choke units, pump plunger, and any other plastic, leather, fiber, or rubber parts) in clean carburetor solvent. Do not leave parts in the solvent any longer than is necessary to sufficiently loosen the deposits. Excessive cleaning may remove the special finish from the float bowl and choke valve bodies, leaving these parts unfit for service. Rinse all parts in clean solvent and blow them dry with compressed air or allow them to air dry. Wipe clean all cork, plastic, leather, and fiber parts with a clean, lint-free cloth.

Blow out all passages and jets with compressed air and be sure that there

are no restrictions or blockages. Never use wire or similar tools to clean jets, fuel passages, or air bleeds. Clean all jets and valves separately to avoid accidental interchange. Check all parts for wear or damage. If wear or damage is found, replace the defective parts. Especially check the following:

1. Check the float needle and seat for wear. If wear is found, replace the complete assembly.
2. Check the float hinge pin for wear and the float(s) for dents or distortion. Replace the float if fuel has leaked into it.
3. Check the throttle and choke shaft bores for wear or an out-of-round condition. Damage or wear to the throttle arm, shaft, or shaft bore will often require replacement of the throttle body. These parts require a close tolerance of fit. Wear may allow air leakage, which could affect starting and idling.
4. Inspect the idle mixture adjusting needles for burrs or grooves. Any such condition requires replacement of the needle, since you will not be able to obtain a satisfactory idle.
5. Test the accelerator pump check valves. They should pass air one way but not the other. Test for proper seating by blowing and sucking on the valve. Replace the valve if necessary. If the valve is satisfactory, wash the valve again to remove breath moisture.
6. Check the bowl cover for warped surfaces with a straight edge.
7. Closely inspect the valves and seats for wear and damage, replacing as necessary.
8. After the carburetor is assembled, check the choke valve for freedom of operation.

Carburetor overhaul kits are recommended for each overhaul. These kits contain all gaskets and new parts to replace those that deteriorate most rapidly. Failure to replace all parts supplied with the kit (especially gaskets) can result in poor performance later.

After cleaning and checking all components, reassemble the carburetor, using new parts and referring to the exploded view. When reassembling, make sure that all screws and jets are tight in their seats, but do not overtighten as the tips will be distorted. Tighten all screws gradually, in rotation. Do not tighten needle valves into their seats. Uneven jetting will result. Always use new gaskets. Be sure to adjust the float level, following the instructions contained in the rebuilding kit, when reassembling.

## CHRYSLER IMPORTS AND MITSUBISHI

### Float Level Adjustment

1. Invert the float chamber cover assembly without a gasket.
2. Position a float gauge and measure the distance from the bottom of the float to the surface of the float chamber cover.
3. If not within specification the shim under the needle seat must be changed.